14. HUDSON RIVER, NEW YORK CANALS, AND LAKE CHAMPLAIN

(1) The **Hudson River** extends N from The Battery at New York City for about 152 miles to the head of tidal navigation at the Troy Lock and Dam at Troy, N.Y. (This section of the Hudson River is described in United States Coast Pilot 2, Cape Cod to Sandy Hook.)

(2) A Federal project provides for a 32-foot channel from New York City to Albany, thence a 14-foot channel to the Troy Lock and Dam. (See Notices to Mariners and latest editions of charts for controlling depths.)

(3) **Chart Datum, Hudson River**–The plane of reference for depths shown on charts of the Hudson River is mean low water as far N as the upper end of Haverstraw Bay, about 38 miles above The Battery. From Haverstraw Bay to the Troy Lock and Dam, the reference plane is Hudson River Datum, which is mean low water during lowest river stages.

(4) **Charts 12348, 14786.–Troy Lock and Dam** at **Troy, N.Y.**, 154 miles above The Battery at New York City, is the lower entrance to the New York State Canal System. The lock has a length of 492.5 feet and width of 44.4 feet, with a depth of 13 feet over the lower sill at lowest low water. The lift of the lock at lowest stages is 17.3 feet.

(5) **Regulations.**–(See **33 CFR 207.50,** chapter 2, for lock regulations and signals.)

(6) **Chart 14786.**–Above Troy Lock, the Hudson River extends N for about 2.3 miles to the junction of Erie Canal and Champlain Canal at **Waterford, N.Y.**

(7) The **New York State Canal System**, built and maintained by the State of New York, is a waterway providing access from the Hudson River to Lake Champlain on the E and to Lake Ontario and Lake Erie on the W. The system, comprising Champlain Canal, Erie Canal, Oswego Canal, and Cayuga and Seneca Canal, is 524 miles long, of which 370 miles are canalized rivers, streams, and lakes, and 154 miles are artificial land cuts. Detailed data regarding movement through the New York State Canal System may be obtained from the New York State Canal Corporation, Office of Canals, 200 Southern Boulevard, P.O. Box 189, Albany, NY 12201-0189, telephone (518-471-5011).

(8) A toll free telephone number (1-800-4CANAL4) to receive prerecorded messages and for publicizing events and attractions along the canal system is available to mariners within the state of New York.

(9) **Chart Datum, New York State Canal.**–The plane of reference for depths shown on charts of the New York State Canal System is normal pool level.

(10) **Champlain Canal,** 60 miles long, follows the canalized Hudson River from Waterford N to **Fort Edward, N.Y.,** thence follows a land cut and canalized **Wood Creek** to Lake Champlain. From Waterford, 8 locks ascend 124.8 feet to the summit elevation of 140 feet about 1.3 miles NE of Fort Edward, thence 3 locks descend 43.5 feet to **Whitehall, N.Y.,** at the S end of Lake Champlain.

(11) **Charts 14786, 14788.**–The **Erie Canal** is 338 miles long from Waterford W across New York State to Tonawanda on the Niagara River. From Waterford, the canal follows the canalized **Mohawk River,** a short reach of **Wood Creek,** and several intersparsed land cuts to **Oneida Lake.** After passing through the lake, the canal follows **Oneida River, Seneca River, Clyde River,** and several land cuts to **Lyons, N.Y.** A 6.8-mile-long branch channel extends SE from the Seneca River through **Onondaga Lake** to **Syracuse, N.Y.** W of Lyons, the canal is an artificial channel to **Pendleton, N.Y.,** thence the canal follows Tonawanda Creek to Tonawanda. About 39 miles W of Lyons, the canal crosses the **Genesee River.** From the intersection, a 3.2-mile section of the Genesee River has been improved to provide access from the canal to Rochester. A dam on the Genesee River 7 miles downstream of the canal precludes navigable access to Lake Ontario.

(12) The Erie Canal, from Waterford to Tonawanda, has 34 locks. At Waterford, a flight of 5 locks ascends 168.8 feet from the pool above Troy Lock and Dam around Cohoes Falls to the Mohawk River, thence 14 locks ascend the Mohawk Valley 236 feet to the summit level near Rome, N.Y., thence 3 locks descend 57 feet to Three Rivers, N.Y., at the junction with Oswego Canal, and thence 12 locks ascend 201 feet to the Niagara River.

(13) **Chart 14786.–Oswego Canal** branches NW from Erie Canal about 160 miles W of Waterford at **Three Rivers, N.Y.,** at the confluence of Oneida River, Seneca River, and Oswego River. The canal, 24 miles long, is formed almost entirely by the canalized **Oswego River.** The canal descends 118 feet through 7 locks from Three Rivers to Lake Ontario. (Oswego Harbor is described in chapter 5.)

(14) **Charts 14786, 14791.–Cayuga and Seneca Canal** branches S from the Erie Canal about 41 miles W of Three Rivers. The canal follows canalized Seneca River and leads S through both **Cayuga Lake** and **Seneca Lake.** The canal is 92 miles long to **Ithaca, N.Y.,** at the S end of Cayuga Lake and to **Watkins Glen, N.Y.,** at the S end of Seneca Lake including a 2.5-mile cut to **Montour Falls, N.Y.,** S of Watkins Glen. From the Erie Canal, 1 lock ascends 7.5 feet to Cayuga Lake, and thence 3 locks ascend 64.5 feet to Seneca Lake.

(15) **Caution.**–Four private special purpose lighted mooring buoys, painted red and white, mark a barge moored about 2.9 miles N of **Long Point** (42°39.4'N., 76°54.6'W.) on Seneca Lake. Three private special purpose lighted mooring buoys, painted red and white, mark a barge moored about 1 mile NE of Long Point.

(16) Another facility of barge and buoys is 0.25 mile SW of **Portland Point** near the S end of Cayuga Lake. The barge and two mooring cables are each marked by a white buoy floodlighted at night. The barge is marked by four vertical lights, one showing fixed white and three showing fixed red.

(17) **New York State Canal, Chart Coverage**.–The National Ocean Service provides chart coverage of the New York State Canal System from the Hudson River at Troy, NY, as far W as Lyons, NY. Coverage of the canal system from Syracuse W to the Niagara River at Tonawanda, NY, is contained in New York State Canal Guide, available from Mid-Lakes Navigation Company, Ltd., Box 61, Skaneateles, NY 13152, 1(800)545-4318; 315-685-8500.

(18) **Channels.**–The **Great Lakes-Hudson River Waterway Improvement** is that part of the canal system including the Erie Canal from Waterford W to Three Rivers and thence the Oswego Canal to Lake Ontario. This section of the system, funded by the U.S. Government and maintained by the State of New York, has a

Structures across the Hudson River
**Miles above The Battery, New York City*
***Clear width in feet proceeding upsteram*

No.	Location and Name	Kind	MIles*	Clear width in feet of draw or span openings**			Clear height in feet above Water Datum		Remarks
				Right	Left	Center	Low	High	
1	George Washington Bridge (I–95; US 1/9)	Highway	11.0			3,169		195	Suspension. Note 1.
2	Tappan Zee Bridge (I–87/287)	Highway	27.0	499	500	1,098		139	Fixed.
3	Overhead cables	Power	41.8					160	
4	Peekskill: Bear Mountain Bridge (SR 6)	Highway	46.7			1,584		155	Fixed.
5	Newburgh: Beacon Bridge (I–84)	Highway	62.0	550	550	760		148	Fixed. Under construction 1979.
6	Newburgh Beacon Bridge (I–84)	Highway	62.0	550	550	960		150	Fixed. Note 2.
7	Poughkeepsie: Mid-Hudson Bridge (US 44)	Highway	75.6	520	450	1,458		137	Suspension. Note 3.
8	Poughkeepsie: ConRail Bridge	Railroad	76.1			490		167	Fixed.
9	Kingston: Rhinecliff Bridge (SR 199)	Highway	94.3	760	760			135	Fixed.
10	Catskill: Rip Van Winkle Bridge (SR 23)	HIghway	113.6			480		142	Fixed,
11	Overhead cables	Power	116.2					145	
12	Overhead cable	Power	135.5					185	
13	Castleton: ConRail Bridge	Railroad	135.6	75	566	371		139	Fixed. Clearance is for left span.
15	Castleton: Castleton-on-Hudson Bridge (I–90 E-W; NY State Thruway)	Highway	135.7			552		135	Fixed.
16	Overhead cable	Power	141.9					169	
17	Overhead cable	Power	142.1					194	
18	Dunn Memorial Bridge (US 9/20)	Highway	145.4			300		60	Fixed.
19	Albany: ConRail/Amtrak Bridge	Railroad	146.2	103	98			25	Swing. Note 4.
20	Overhead cable	Power	146.2					135	
21	Overhead cable	Power	146.8					88	
22	Albany: Patroon Island Bridge (I–90)	Highway	147.2			300		60	Fixed.
23	Overhead cable	Power	148.5					95	
24	Overhead cable	Power	149.7					87	
25	Troy/Menands: Menands Bridge (SR 378)	Highway	150.2			317		61	Note 5.
27	Troy: Congress St. Bridge (SR 2)	Highway	152.1			250		55	Fixed.
28	Troy: Green Island Bridge (SR 7)	Highway & Railroad	152.7			167		24	Vertical lift. Being removed 1978.
29	Troy: Green Island Bridge (SR 7)	Highway	152.7			184		29	Vertical lift. Under construction 1979. Notes 4 and 7.
30	Troy/Green Island: Collar City Bridge	Highway	153.1	145	200			60	Fixed. Under constructuion 1978.
	Troy Lock		153.9						
31	Troy/Cohoes: 112th Street Bridge (SR 470)	HIghway	155.4			175	33		Bascule. Notes 4 and 6.

Note 1.–The bridge has a center clearance of 213 feet, with a clearance of 210 feet at the W end of the span and 195 feet at the E end of the span.

Note 2.–The bridge has a center clearance of 181 feet, with a clearance of 150 feet for a center width of 760 feet.

Note 3.–Clearance is for 750-foot center width.

Note 4.–See **33 CFR 117.1 through 117.59 and 117.791**, chapter 2, for the drawbridge regulations.

Note 5.–Vertical lift span maintained in the closed position. See **33 CFR 117.791** , chapter 2, for drawbridge regulations.

Note 6.–Clearance is above maximum navigable pool level.

Note 7.–The design clearance in the up position is 60 feet.

project depth of 14 feet at normal pool level between locks and 13 feet at normal pool level through all locks and guard gates. These channels have widths of 104 feet in earth cuts, 120 feet in rock cuts, and 200 feet in river and lake sections.

(19) Elsewhere in the New York State Canal System, the project depth is 12 feet in all channels and through all locks and guard gates. These channels have widths of 75 feet in earth cuts, 94 feet in rock cuts, and generally 200 feet in canalized rivers.

(20) The canal system is well marked by lights, lighted ranges, lighted and unlighted buoys, and daybeacons, all maintained by the State of New York. The arrangement of aids considers the entire canal system as a waterway extending from the Hudson River to interior parts of the State. All red lights, daybeacons, and buoys are on the right or starboard hand, and all white lights, daybeacons, and buoys are on the left or port hand when proceeding up or away from the Hudson River, or away from the main line in the branches. This arrangement extends W to Tonawanda on the Niagara River. However, buoyage in the Niagara River is based on the principle that "proceeding from seaward" is proceeding from Lake Erie toward the Niagara Falls. Mariners are therefore reminded, after exit from the canal into the Niagara River, to keep red buoys to port and green buoys to starboard when continuing on to Lake Erie.

(21) **Locks.**–The New York State Canal System has a total of 56 locks plus the Federal lock at Troy. The controlling dimensions of the locks are a length of 300 feet and a width of 43.5 feet. The locks and guard gates have a depth of 12 feet over the sills at normal pool level, except 13 feet over the sills in the Great Lakes-Hudson River Waterway Improvement. The lock lifts range from 6 feet to 40.5 feet, with an average lift of 17.7 feet. The guard gates at various points in the canal system have a pier in midchannel with a clear passage of 55 feet on either side.

(22) **Bridges.**–The canal system is crossed by a total of over 300 bridges. Most of the bridges are fixed, except where local conditions necessitate other types. The least vertical clearance for bridges crossing the part of the system known as the Great Lakes-Hudson River Waterway Improvement is 20 feet, and the least clearance for all other parts of the canal system is 15 feet.

(23) **Regulations.**–A **speed limit** of 6 mph is enforced in the canal, except in the canalized rivers and lakes. In the canalized rivers and lakes, the speed limit is dependent on traffic conditions, and speed limits for the various sections are posted at each lock. Copies of the canal regulations and detailed information regarding movement through the canal are available from the New York State Canal Corporation, Office of Canals, 200 Southern Boulevard, P.O. Box 189, Albany, NY 12201-0189, telephone (518-471-5011).

(24) **Small-craft facilities.**–Marinas providing all types of small craft services and supplies are located throughout the canal system. A list of sewage pump-out facilities in New York State is available from the New York State Department of Environmental Conservation, 50 Wolf Road, Albany, N.Y. 12205.

(25) **Charts 14784, 14783, 14782, 14781.–Lake Champlain** extends from the lower end of Champlain Canal at Whitehall, N.Y., N for about 112 miles to the International boundary at Rouses Point, N.Y. The N end of the lake outlets N through Riviere Richelieu and Canal de Chambly to the St. Lawrence River.

(26) The principal ports on the lake are Port Henry, N.Y., at the S end, Burlington, VT, and Plattsburgh, N.Y., near midlake, and Rouses Point, N.Y., at the N end. The lake is used extensively by pleasure craft, and marinas are found on both sides throughout its length.

(27) **Chart Datum, Lake Champlain.**–The plane of reference for depths shown on the charts covering Lake Champlain is low lake level, which is 93.0 feet above mean sea level.

(28) A **special anchorage** is on the W side of the lake in **Deep Bay.** (See **33 CFR 110.1 and 110.8(i),** chapter 2, for limits and regulations.)

(29) **Channels.**–The S 37 miles of Lake Champlain, from Whitehall N to **Crown Point** (44°01.8'N., 73°25.8'W.), is a narrow arm. The S 13 miles of this arm, from Whitehall N to **Benson Landing,** is filled with a marshy flat traversed by a narrow channel of open water. A Federal project provides for a 12-foot channel through this reach. In 1979, the centerline controlling depth in the reach was 11 feet. Above Benson Landing, natural deep water is available to Crown Point. The entire narrows, from Whitehall to Crown Point is well marked by lights and buoys.

(30) N from Crown Point for about 75 miles to Rouses Point, Lake Champlain is deep and wide. Prominent points and shoals throughout the lake are marked by lights and buoys.

(31) **Fluctuations of water level.**–The water level of Lake Champlain is subject to variation from year to year; the observed range is from 0.6 foot below to 8.8 feet above the reference plane of low lake level. During each year, the seasonal fluctuation is 4 to 5 feet, the lowest stage occurring in September or October and the highest stage in April or May.

(32) Following is a description of the principal ports and tributaries of Lake Champlain.

(33) **Chart 14784.–Poultney River,** not navigable, flows into the E side of Lake Champlain about 1 mile N of Whitehall. The **State boundary** between New York and Vermont follows Lake Champlain from the mouth of Poultney River N to the International boundary.

(34) Marinas in the stretch from Whitehall to Port Henry are at **Chipman Point** 19 miles N of Whitehall, 1.5 miles N of Chipman Point, and at the mouth of **Hospital Creek** opposite Port Henry. The usual services and travelifts to 20 tons are available.

(35) **La Chute** is a creek that flows into the W side of the lake about 22 miles N of Whitehall. The approach to the creek is very shoal and weedy and is not recommended for other than small outboards, which can then navigate the creek for about 1 mile during high stages. **Fort Ticonderoga,** on the point E of the creek mouth, is prominent from the lake.

(36) **Cable ferry.**–Fort Ticonderoga Ferry crosses the lake about 1.7 miles above La Chute. The ferry barge is towed by a tug and guided across the lake by two cables which are fixed on either shore. Passing through guides and carrier wheels on the ferry, the cables are dropped to the bottom astern and picked up ahead. The cables reach the bottom about 400 feet from either end of the ferry thus allowing vessels to pass by the moving ferry. The tug and barge are marked by lights, and signs on both and along the shore warn vessels of the presence of the ferry and the cables. **Extreme caution is advised when passing the cable ferry. The ferry should never be passed closeby.**

(37) A **special anchorage** is on the W side of the lake just S of the ferry crossing. (See **33 CFR 110.1 and 110.8(a),** chapter 2, for limits and regulations.)

Structures across Lake Champlain
*Miles from Whitehall
**Clear width in feet proceeding away from Whitehall

No.	Location and Name	KInd	MIles*	Clear width in feet of draw or span openings**			Clear height in feet above Water Datum		Remarks
				Right	Left	Center	Low	High	
1	Overhead cable	Power	0.3						Data not available.
2	Overhead cable	Power	1.0						Data not available.
3	South Bay-Delaware & Hudson Ry. Bridge	Railroad	2.5	89	89	96	11		Fixed.
4	South Bay-Overhead cable	Power	3.0						Data not available.
5	South Bay-State Route 22 bridge	Highway	3.2						Fixed. Data not available.
6	Crown Point-Chimney Point bridge	Highway	36.7			186	91		Fixed. Note 1.
7	Colchester Point-South Hero Island bridge		78.1			177			Swing span and center pier removed.
9	Sand Bar Bridge	Highway	82.6			54	15		Fixed.
10	South Hero-North Hero Islands bridge		90.1			158			Swing span and center pier removed.
11	South Hero-North Hero Islands (U.S. 2) bridge	Highway	91.8			80	18		Bascule. Note 2.
12	Pelots Point-Alburg Tongue bridge		95.7			154			Swing span and center pier removed.
13	North Hero Island-Alburg Tongue (South Alberg) bridge	Highway	99.2			70	25		Fixed.
14	Overhead cables	Highway	99.3				47		
15	Isle La Motte-Alburg Tongue bridge	Highway	99.4			30	8		Fixed.
16	Missisquoi Bay-Central Vermont Ry. bridge	Railroad	105.6			36	11		Swing. Note 2.
17	Overhead cables	Power	105.9				50		
18	Missisquoi Bay-East Alburg (State Route 78) bridge	Highway	105.9			45	18		Bascule. Note 2.
19	Rouses Point bridge		106.8			237	56		Fixed. Note 1.

Note 1.–Bridge is across the direct route through the lake proceeding from the Hudson River to the St. Lawrence River.
Note 2.–See **33 CFR 117.1 through 117.59, 117.797, and 117.993**, chapter 2, for drawbridge regulations.

(38) **Port Henry, N.Y.,** is on the W side of Lake Champlain at the S end of the wide section, about 39 miles N of Whitehall.

(39) **Channels.**–A dredged basin along the harbor front is entered from S. The E side of the entrance is marked by a buoy that marks the S end of the shoals that border the E side of the basin. At the N end of the harbor, a 500-foot pier of the New York State Canal System extends SE from shore and is marked at the outer end by a private light. The pier also serves as a breakwater to protect the harbor from N. A State-dredged channel leads from deep water W to the terminal. In 1967, the maximum depth available in the harbor basin and barge canal terminal channel was 12 feet.

(40) **Small-craft facilities.**–A 50-ton marine railway, which can handle 50-foot craft for hull and engine repairs, gasoline, diesel fuel, water, ice, electricity, sewage pump-out, marine supplies, launching ramps, and mooring buoys are available at the marinas in Port Henry.

(41) **Bulwagga Bay,** S of Port Henry on the W side of Crown Point, is foul with submerged piles and cribs. A line of submerged piles that extends from the E side across the mouth of the bay is marked by private buoys.

(42) **Chart 14783.**–Between **Barber Point** (44°09.2'N., 73°24.3'W.) and **The Four Brothers** 20 miles N, marinas are on the W side of the lake at **Westport, N.Y.,** and **Essex, N.Y.,** and on the E side of the lake on the S side of **Thompsons Point** and in **McNeil Cove.** Marine railways to 50 tons, lifts to 35 tons, and the usual services are available.

(43) **Special anchorages** are on the E side of Thompsons Point and at Essex, N.Y. (See **33 CFR 110.1 and 110.8 (b) and (g),** chapter 2, for limits and regulations.)

(44) **Otter Creek** flows into the E side of the lake about 6.5 miles NE of Barber Point. A depth of about 6 feet can be carried by small craft for 8 miles to **Vergennes, VT.**

(45) **Boquet (Bouquet) River,** 3 miles N of Essex, is navigable by small motorboats for about 1 mile during high water stages.

(46) **Charts 14783, 14782.–Willsboro Bay,** on the W side of the lake W of The Four Brothers, is enclosed on the E by **Willsboro Point.** Marinas on the E side of the bay provide transient berths, gasoline, diesel fuel, electricity, ice, sewage pump-out, mast-stepping service, launching ramps, and hull and engine repairs.

(47) **Shelburne Bay,** E of The Four Brothers, is enclosed on the W by **Shelburne Point.** Two special anchorages are on the W side of the bay. (See **33 CFR 110.1 and 110.8(c) and (c–1),** chapter 2, for limits and regulations.) A boatyard on the W side of the bay provides transient berths, gasoline, diesel fuel, water, ice, electricity, and sewage pump-out. A 220-foot marine railway and a 30-ton lift are available for hull and engine repairs.

(48) **Charts 14782, 14785.–Burlington, VT,** just N of the entrance to Shelburne Bay, is the largest port on Lake Champlain. Several companies have dock facilities for receipt of petroleum products by barge. The Radisson Hotel, with a red lighted sign, is the most prominent object in the harbor approach.

(49) **Burlington Breakwater North Light** (44°28.8'N., 73°13.8'W.), 35 feet above the water, is shown from a red skeleton tower adjoining a small white house on the N end of the N breakwater; a fog signal is at the light.

(50) **Channels.**–Two detached breakwaters parallel the shore and protect the harbor front from W. A light with a fog signal marks the N end of the N breakwater, a light marks the S end of the S breakwater, and a daybeacon marks the N side of the gap between them. Depths in the harbor are 6 to 12 feet off the wharves increasing to much greater depths at the breakwaters. Good anchorage is available behind the breakwaters.

(51) **Burlington Coast Guard Station** is at the N end of the harbor, E of Burlington Breakwater North Light.

(52) **Harbor regulations** are established by the Burlington City Council and are enforced by the **harbormaster** who may be reached at City Hall. A **speed limit** of 5 mph is enforced in the city yacht basin. Copies of the regulations may be obtained from the Mayor, City Hall, Burlington, VT 05401.

(53) **Small-craft facilities.**–Marinas in the city yacht basin 0.6 mile SE of Burlington Breakwater North Light provide transient berths, gasoline, diesel fuel, water, ice, electricity, and a launching ramp.

(54) A **special anchorage area** for vessels less than 65 feet in length is about 0.2 mile NE of Burlington Breakwater South Light. (See **33 CFR 110.1 and 110.8(h)**, chapter 2, for limits and regulations.)

(55) **Ferry.**–Passenger and automobile ferries operate seasonally between Burlington and Port Kent, N.Y., 10 miles WNW.

(56) **Caution.**–An operations area for amphibious and air rescue training is in midlake W of Burlington, bounded generally by Schuyler Reef, Appletree Shoal, Juniper Island, and The Four Brothers. The using agency is Plattsburgh Air Force Base.

(57) **Chart 14782.**–From Willsboro Bay N to Plattsburgh, N.Y., marinas are at **Port Kent, N.Y.,** 4.5 miles N of Port Kent, and W of **Valcour Island.** The usual small-craft facilities are available.

(58) **Winooski River,** 4 miles NNW of Burlington, is navigable by small motorboats.

(59) **Malletts Bay,** 6 miles N of Burlington, is a nearly landlocked bay protected on the W by **Malletts Head.** About 3.5 miles W of Malletts Head, in the approach to the bay from the open lake, an abandoned railroad dike extends from the mainland shore N to the S end of Grand Isle near midlake. A narrow gap near the N end of the dike, marked on either side by a private light, provides access for small craft. A shifting bar at the gap has depths of as little as 3 feet. A 1-foot spot just inside the gap is marked by a buoy. **Special anchorages** are on the W side of Malletts Bay. (See **33 CFR 110.1 and 110.8(d) and (e),** chapter 2, for limits and regulations.) Marinas in Malletts Bay provide transient berths, gasoline, diesel fuel by truck, water, ice, electricity, sewage pump-out, marine supplies, and launching ramps. Lifts to 20 tons are available for hull and engine repairs.

(60) **Plattsburgh, N.Y.,** is on the W side of **Cumberland Bay,** 20 miles NW of Burlington. Several companies receive petroleum products by barge at the town.

(61) **Channels.**–The dredged basin along the city waterfront is protected from the E by a detached breakwater paralleling the shore. The ends of the breakwater are marked by lights. The breakwater has been reported to be come submerged during periods of high water; mariners are advised to use caution when transiting the area. The controlling depths are 5 to 9 feet at the wharves increasing to 12 feet at the breakwater. The protected area of the harbor provides good anchorage. A seasonally deployed floating breakwater is close S of the wharves on the W side of the basin.

(62) **Wharf.**–A terminal of the New York State Canal System is in the NW corner of Cumberland Bay. The wharf has a 400-foot S face with a reported depth of 12 feet alongside. The approach to the wharf is marked by a buoy and a private **322°** lighted range.

(63) **Small-craft facilities.**–A marina at Plattsburgh provides transient berths, gasoline, diesel fuel, water, ice, electricity, sewage pump-out, marine supplies, and a launching ramp. A 20-ton lift is available for hull and engine repairs.

(64) **Ferry.**–A ferry operates from the E side of **Cumberland Head,** which encloses the E side of Cumberland Bay, to the W side of Grand Isle.

(65) **Charts 14782, 14781.–Grand Isle** or **South Hero Island, North Hero Island,** and **Alburg Tongue** divide the N part of Lake Champlain into two arms. **Missisquoi Bay** is at the N end of the E arm, and Riviere Richelieu flows N from the W arm.

(66) **Lamoille River,** 2.8 miles N of Mallets Bay, is navigable at low stages only by motorboats drawing 1 to 2 feet. The channel through the fixed span of the bridge that connects the S end of Grand Isle with the mainland had a reported controlling depth of less than 2 feet in 1977. **Missisquoi River,** flowing into the S side of Missisquoi Bay, is navigable at low stages by motorboats drawing 1 to 2 feet for about 6 miles to Swanton. **Dead Creek,** the alternate entrance to the river, has depths of 2 to 12 feet.

(67) Marinas are in the E arm of the N end of Lake Champlain on the SE side of Grand Isle, at the NE end of **Burton Island** on the W side of **St. Albans Bay,** in **City Bay** on the E side of North Hero Island, and on the E side of **Alburg Passage.** Lifts handling boats to 25 feet are available.

(68) A **special anchorage** is at the head of St. Albans Bay. (See **33 CFR 110.1 and 110.8(f),** chapter 2, for limits and regulations.)

(69) **Great Chazy River** flows into the W side of Lake Champlain about 4 miles S of Rouses Point, N.Y. The entrance to the river is marked by private lighted and unlighted buoys. The river is navigable at low stages by small boats drawing 2 to 3 feet for about 6 miles to Champlain. In 1979, the entrance channel had a controlling depth of 5 feet. In 1977, 5 feet was reported available to the marina 0.5 mile above the mouth.

(70) In 1992, an obstruction was reported in the entrance channel between Buoy 8 and Buoy 10.

(71) Marinas are in **Mooney Bay** (44°47.2'N., 73°22.0'W.) opposite the S end of North Hero Island and 0.5 mile above the mouth of Great Chazy River. Lifts handling boats up to 25 feet are available.

(72) **Chart 14781.–Rouses Point, N.Y.,** is a town and harbor on the W side of the N end of Lake Champlain, just S of the International boundary. The harbor is formed by a bight that extends 2 miles N from **Stony Point.** A detached breakwater, marked at the outer end by a light, extends NE from Stony Point to protect the harbor from S, and a pile railroad trestle protects the harbor from NE.

(73) The harbor has depths of 6 to 8 feet in all seasons of the year, except for depths of 4 feet and less on a reef that extends 0.5 mile S from the point that encloses the N end of the harbor. Anchorage bottom in the harbor is good.

(74) Rouses Point is a **customs port of entry.**

(75) **Quarantine, customs, immigration, and agricultural quarantine.**–(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

(76) **Quarantine** is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(77) **Small-craft facilities.**–A protected basin is between the railroad trestle and a 500-foot pier just S. The outer 200 feet of the basin has depths of 6 to 8 feet, and the inner part is foul. Marinas at Rouses Point provide transient berths, gasoline, diesel fuel, water, ice, electricity, sewage pump-out, and some marine supplies. A 10-ton mobile lift is available for hull and engine repairs.

(78) **Canadian Waters**.–The **International boundary** between the United States and Canada is on a general E and W line about 2.7 statute miles (2.3 nm) N of **Stony Point** (44°58.5'N., 73°21.7'W.).

(79) **Charts 14781, *1351, *1350.–Riviere Richelieu** flows N from the head of Lake Champlain at Rouses Point for about 80 statute miles (69.5 nm) to its mouth at the St. Lawrence River at the city of **Sorel, Que.,** about 46 statute miles (about 40 nm) below Montreal.

(80) **Restricting dimensions.**–The size of vessels passing through the system is limited by the dimensions of the locks of **Canal de Chambly** and by the bridge **Pont Felix-Gabriel-Marchand** across the Canal de Chambly in the vicinity of **Saint-Jean-sur-Richelieu**; length 33.98 m (111 feet), width 7 m (23 feet), depth over the sills 1.98 m (6.5 feet), least vertical clearance 8.8 m (29 feet). In periods of extreme low water levels the least draft will be less..

(81) See **Canadian Sailing Directions Saint Lawrence River-Cap Rouge to Montreal (ATL 112)** for detailed description of the system.